In the Claims

1-2 (canceled)

3. (original) A method of coating an anode/collector used in a vacuum tube, the method comprised of:

coating the anode/collector with a thin film of carbon;

coating the anode/collector with a carbonizable resin;

baking the anode/collector to totally carbonize the resin;

depositing pyrocarbon material by pyrolysis through chemical vapor deposition; and

baking the anode/collector in a vacuum oven to remove any remaining water.

4. (original) The anode/cathode coating method of claim 3, wherein the carbonizable resin is baked at a temperature of at least 700 degrees centigrade.

5. (original) The anode/cathode coating method of claim 3, wherein the carbonizable resin is a phenolic.

6. (new) A coating for an anode for a vacuum tube, comprising:

a layer of porous carbon char; and

a layer of pyrocarbon being applied over the char layer by chemical vapor deposition, whereby

a non-porous rigid surface is created.

7. (new) An anode coating as defined in Claim 6 wherein the anode is comprised of a metal.

8. (new) An anode coating as defined in Claim 6 wherein the coating is applied solely to an electron impact surface of the anode.

9. (new) An anode coating as defined in Claim 6 wherein:

the pyrocarbon layer is a plurality of pyrocarbon layers, and

a coating thickness is obtained by selecting the number of pyrocarbon layers.

10. (new) An anode coating as defined in Claim 6 further comprising:

a layer of carbonizable resin, whereby

the char layer is formed by baking the anode having the layer of carbonizable resin in a non-oxidizing atmosphere.

11. (new) A method of coating an electron impact surface of an anode with pyrocarbon, comprising:

coating the electron impact surface with a carbonizable resin;

carbonizing the resin to form a char;

depositing carbon on the char to form a coating of pyrocarbon; and

removing any residual water from the pyrocarbon coating.

12. (new) A coating method as recited in Claim 11 wherein the carbon depositing step includes directing a flow of hydrocarbon gas over the electron impact surface after heating the electron impact surface to at least 1000 °C.

13. (new) A coating method as recited in Claim 12 wherein the removing water step includes heating the anode to at least 100 °C in a vacuum.

14. (new) A coating method as recited in Claim 11 wherein:

the carbonizable resin has volatile components; and

carbonizing the resin includes heating the anode to a temperature sufficient to decompose the resin and release the volatile components, whereby

the char is left as a porous residue.

15. (new) A coating method as recited in Claim 14 wherein the carbonizing step includes heating the anode to a temperature of at least 700 °C in a non-oxidizing atmosphere.

16. (new) A coating method as recited in Claim 15 wherein the carbonizable resin is a phenolic.

17. (new) A coating method as recited in Claim 14 wherein the carbon depositing step includes directing a flow of hydrocarbon gas over the char after heating the electron impact surface to at least 1000 °C.

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18. (new) A coating method as recited in Claim 17 wherein the carbonizing step includes heating the anode to a temperature of at least 700 °C in a non-oxidizing atmosphere.

19. (new) A coating method as recited in Claim 14 wherein the heating step includes baking the anode in an oven providing a non-oxidizing atmosphere.

20. (new) A coating method as recited in Claim 11 wherein the carbon depositing step includes pyrolysis through chemical vapor deposition.

21. (new) A coating method as recited in Claim 20 wherein the pyrolysis step includes heating the anode to at least 1000 °C.

22. (new) A coating method as recited in Claim 20 wherein the removing water step includes baking the anode in a vacuum oven.